



WUJAL WUJAL
Aboriginal Shire Council

2020/2021

**Drinking Water Quality Management Plan Annual
Report**

Wujal Wujal Aboriginal Shire Council

Service Provider ID: 517

Approved by CEO	Stephen Wilton
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This report has been prepared in accordance with the applicable Drinking Water Quality Management Plan Report Guidance Note September 2018.



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Glossary of Terms

Table 1 – Abbreviations

Abbreviations	
CFU	Colony Forming Unit
DWQMP	Drinking Water Quality Management Plan
ESO	Emergency Services Officer
HAAC	Health & aged care facility
kL	Kilo Litre (1000L)
NTU	Nephelometric Turbidity Unit
OFI	Opportunities For Improvement
SOP	Standard Operating Procedures
SPID	Service Provider Identification Number
WQ	Water Quality
WWASC	Wujal Wujal Aboriginal Shire Council



1 Introduction

This is the Drinking Water Quality Management Plan ('DWQMP') Annual report for Wujal Wujal Aboriginal Shire Council ('WWASC') for the financial year 2020/2021. This report is prepared to meet the requirements of the [Water Supply \(Safety and Reliability\) Act 2008](#). The report is prepared using the Drinking Water Quality Management Plan Report Guidance Note September 2018 prepared by Water Supply Regulation Natural Resources, Department of Natural Resources, Mines and Energy.

The purpose of the report is to demonstrate to our customers, stakeholders and the water supply regulator (i.e. the Director-General of the Department of Regional Development, Manufacturing and Water) the implementation of the approved DWQMP.

WWASC is a registered service provider with Service Provider Identification Number (SPID) 517. WWASC is operating under its approved DWQMP to ensure consistent supply of safe quality drinking water in order to protect public health.

This Annual DWQMP report includes:

- The activities undertaken over the financial year in operating the drinking water service.
- Drinking water quality summary.
- Summary of performance in implementing the approved drinking water quality management plan.

This report is submitted to the regulator to fulfil the regulatory requirement and is also made available to our customers through our website or for inspection upon request at Council office.

2 Summary of scheme/s operated

Table 2 – Summary of schemes

Scheme Name	Water Source	Treatment processes	Treatment capacity	Towns supplied
Wujal Wujal	Bloomfield river	Pre-filtration to 100 micron scintered stainless steel filter screen. Ultra- filtration to 0.04 microns, sodium hypochlorite chlorination prior to storage, additional chlorination in supply line post storage.	Up to 500 kL/day Average 115 kL/day	Wujal Wujal



3 DWQMP implementation

The actions undertaken to implement the DWQMP are summarised below.

- Council is operating in accordance with the revised revision 4 of the DWQMP approved in April 2019.
- All Council staff has been trained on the requirements of the DWQMP as part of site familiarisation and site inductions, ongoing training is provided through toolbox talks and informal audits by senior staff.
- An Audit of the DWQMP was undertaken on 26th of April with a report date of June 13th. The audit was undertaken by Daniel Deere from Water Futures, council is currently in the process of implementing the actions identified.
- The audit report highlighted a number of compliance and opportunities for improvement (OFI) and suggested recommendations for improvement. These issues and the recommendations are in the process of being addressed with updated Standard Operating Procedures (SOP) under development and a review and update of the DWQMP.
- In the first quarter of 2022 Council will commence with the implementation of a cloud based database for water quality data collected within the raw water and reticulation networks, this approach will remove the onerous task of manually data entry of data collected and will reduce the risk of out of specification data not being recognised and actioned.
- In the first quarter of 2022 Council will investigate alternative means of disinfection as the current practice of supply of sodium hypochlorite through a 200L drum from Cooktown has both water quality and OHS risks associated with it.

The actions undertaken to implement the risk management improvement program within the DWQMP are discussed in Table 2 below. This information is provided as a summary, refer to the full report for a detailed overview.

During the reporting period only one incident had occurred with a loss of service event. The rootcause of the event was a power outage in combination with leave for a key staff member. The incident was reported and other staff have been provided with training to prevent reoccurrence. In addition council is looking to automate plant start-up after a power outage.

Table 3 Risk Management Improvement program implementation status



Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer / Position
WWASC	5.2.1	Source protection Barriers	Increase in visitor numbers due to boardwalk being installed potentially resulting in increased potential for contamination leading to a risk to water quality	01-05-2022	Environmental raw water sampling, monitoring of visitor numbers and signs of contamination	Raw water monitoring	ESO coordinator
WWASC	5.2.1	Filtration and disinfection barriers	Double block and bleed valve arrangement around WTP bypass was operated incorrectly (single isolation and valves not tagged). There is a potential for untreated water to bypass the WTP.	01-05-2022	Develop Standard Operating Procedures (SOP) for isolation and tag out of assets.	Lock out and tag out implemented for bypass	ESO coordinator
WWASC	5.2.1	Filtration and disinfection barriers	Chlorine dosing was flowpaced only not controlled by online analyser. This has the potential for under or overdosing of drinking water. Consider residual chlorine analyser to establish residual chlorine, alarming and control	01-05-2022	Under consideration	Under consideration	ESO coordinator
WWASC	5.2.1	Protecting drinking water from contamination entering treated water storage tanks	0.8MI Reservoir has lost whirly birds, holes been patched with plate. Whirly birds to be replaced to prevent corrosion of reservoir roof structure	Ongoing	Under consideration	Under consideration	ESO coordinator
WWASC	5.2.1	Protecting drinking water from contamination entering treated water storage tanks	0.3ML has accumulation of lead and debris which has the potential to facilitate ingress of debris resulting in water quality concerns. Missing bolts also provide a potential path for ingress into the treated water.	01-05-2022	Under consideration	Under consideration	ESO coordinator
WWASC	5.2.1	Protecting drinking water from contamination entering via weaknesses in the reticulation system	Reticulation network replacement design had limited isolation valves, program is underway to cut in additional valves to allow for partial isolation of the network in case of a network failure	01-05-2022	Under consideration	Under consideration	ESO coordinator



Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer / Position
WWASC	5.2.1	Protecting drinking water from contamination due to the use of unfit materials and chemicals	Storage of sodium hypochlorite in area which is not climate controlled can lead to degradation of chlorine which in combination with the first point raised can lead to underdosing of chlorine	01-05-2022	Under consideration	Under consideration	ESO coordinator
WWASC	5.2.1	Protecting drinking water from contamination due to the use of unfit materials and chemicals	Brand of sodium hydrochlorite used (Sanichlor) is not specifically approved for use as a water treatment chemical. Clarification should be sought to confirm the chemical is suitable.	01-05-2022	Under consideration	Under consideration	ESO coordinator
WWASC	5.2.2	Implementation of operational and maintenance procedures, including availability of procedures.	No non compliance noted, or concerns noted			6 monthly visual inspection by operators & recorded on operators daily log book. Ongoing	ESO coordinator
WWASC	5.2.3	Implementation of the process for managing incidents and emergencies including reporting requirements to the regulator	No non compliance noted, or concerns noted				ESO coordinator
WWASC	5.2.4	Implementation of the operational and verification monitoring programs	WQ instrumentation was not in calibration and not in use during Audit, benchtop equipment was used instead, and this was updated within the DWQMP. In addition, reagents were inadequately stored	01-05-2022	Under consideration	Under consideration	ESO coordinator
WWASC	5.2.5	Implementation of the risk management improvement program	Evidence of ongoing improvement however the above item represents a retracting standard. Other than the item raised under 5.2.4 no improvement noted				ESO coordinator
WWASC	5.2.6	Maintaining records using the systems as described	No non compliance noted, or concerns noted				ESO coordinator



4 Verification monitoring - water quality information and summary

This section discusses the compliance with the water quality criteria. Reference is as DWQMP table on page 17.

Table 4 Drinking water quality performance – Verification Monitoring



Scheme name	Parameter	No. of samples required to be collected (as per the approved DWQMP)	No. of samples actually collected and tested	Water quality criteria (i.e ADWG health guideline value)	No. of non compliant samples	Comments
WWASC	free chlorine	Five locations tested daily, samples (locations : Exit of the treated water storage site - first point after treatment HAAC– vulnerable consumer Technical services workshop – middle point in reticulation system Kindergarten – vulnerable consumer Art centre – end of reticulation line)	Details of actual sampling results were not available. Anecdotal evidence was provided to demonstrate compliance in general with occasional gaps in data as a result of absenteeism	0.5 mg/L	unknown	Testing is done every day except for public holidays. Council has recently signed up to a database service allowing for data to be captured electronically removing the requirement for manually entering monitoring data. This will increase the reliability of the data and will allow for detection of data that is outside of the Water Quality Criteria or CCP to be identified on the spot so rectification can be undertaken.
WWASC	Turbidity	Five locations tested daily, samples (locations : Exit of the treated water storage site - first point after treatment HAAC – vulnerable consumer Technical services workshop – middle point in reticulation system Kindergarten – vulnerable consumer Art centre – end of reticulation line)	13 samples were collected per location. Additional samples were taken at other locations	<1 NTU	Nil	A number of samples have been returned with a result of 0.1 NTU. Confirmation is will be sought if this is a data entry error or a true measurement.



Scheme name	Parameter	No. of samples required to be collected (as per the approved DWQMP)	No. of samples actually collected and tested	Water quality criteria (i.e ADWG health guideline value)	No. of non compliant samples	Comments
WWASC	<i>E. coli</i> , Total coliforms	Five locations tested monthly, 60 samples (locations : Exit of the treated water storage site - first point after treatment HAAC– vulnerable consumer Technical services workshop – middle point in reticulation system Kindergarten – vulnerable consumer Art centre – end of reticulation line)	13 samples were collected per location, total 72 samples. Additional samples were taken at other locations.	<1 CFU/100mL	0	Tested from 6 sample points tested by Cairns Laboratory Additional samples taken at Sample locations Ayton House #5/16 Third Street, #4/18 West/Third Street and #6/14 Third Street have returned one result each of between 1-3 CFU/100ML. This water source is outside of the supply zone. The results were unable to be confirmed in subsequent samples. Council is undertaking further investigation to improve disinfection in this part of the system.
WWASC	pH	Online monitoring (24/7)				

Comment: samples collected daily (calculated as 250 operational work days a year) from the Art centre & Technical services workshop for free chlorine.

Table 5 *E. coli* compliance with annual value



Drinking water scheme: Wujal Wujal Aboriginal Shire Council area

2019-2021

Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	1	1	1	1	1	1	1	1	1	1	1	1
No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	1	1	1	1	1	1	1	1	1	1	1	1
No. of failures for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100	100	100	100	100	100	100	100	100	100	100	100
Compliance with 98% annual value	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

All testing by Cairns laboratory for Wujal Wujal DWQMP monitoring locations for the year have returned negative *E. coli* readings

5 Incidents reported to the regulator

The incidents reported to the regulator and management actions undertaken over the financial year are provided in this section.

Table 6 Incidents reported to regulator

Incident date	Scheme / location	Parameter / issue	Preventive actions
08-10-2021	Wujal Wujal	Loss of supply	Power outage resulted in loss of supply, WTP did not automatically restart. Plant was restarted manually funding for upgrade of the WTP has been applied for. Training has been provided to key staff to prevent reoccurrence in the short term.



6 Customer complaints

This section discusses details of any complaints received about the drinking water service

Refer to section 2.3.6 in the Guidance Note.

Table 7 Customer complaints about water quality

Scheme	Health concern	Dirty water	Taste and odour	Other
Wujal Wujal	nil	nil	nil	Two notifications were received from the community during the loss of supply incident on 08-10-2021
Total	nil	nil	nil	2

7 DWQMP review outcomes

A summary of the outcomes of the review and how issues/changes raised in the review, were actioned is provided in this section.

Table 8 DWQMP review outcomes Review date 21/12/2021

Review component	Findings	Outcomes	Status of actions	Responsible Officer / Position
Service description	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Details of infrastructure	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Water quality and catchment characteristics	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Risk assessment	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Operations and maintenance procedures	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Management of incidents and emergencies	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Risk management improvement program	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Service wide information management	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Operational monitoring	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer
Verification monitoring	The DWQMP has been reviewed and updated were appropriate.	Updated DWQMP	Complete	ESO Officer



8 DWQMP audit findings

The audit findings and any recommendations and/or opportunities for improvement (OFI), including how these were actioned are discussed below.

The actions undertaken to address the audit recommendations are outlined in Table 3 Risk Management Improvement program implementation status. Refer to the audit report for further details and information.